

Mint of the United States at Philadelphia, Pa.,
Machine Shop
~~SUPERINTENDENT'S OFFICE,~~

Hon, Daniel, W, Fox
Superintendent

August 8th 1885.

Sir, In reply to your favor of the 5th inst, asking information relative to the construction, cost, and the necessity for the purchase of the Coining Press, placed in the Coining Room in the month of June 1885; with such other information as may relate to the same, I beg leave to submit the following.

During the year 1868 there were placed in the Coining Room two coining presses, built by Morgan, Orr, & Co, and numbered respectively 7 & 10. No. 7 Press was located on the west side of the Coining Room, north of the visitors entrance, taking the place of an old pattern press which was sent to Carson City for use in the Mint there, it was I believe never set

Mint of the United States at Philadelphia, Pa.,

SUPERINTENDENT'S OFFICE,

188

up, but was for some reason destroyed.

N^o. 7 Press was built, as was its mate N^o. 10, for the coinage of the Standard Dollar, it was used for that coin until the year 1878, when a crack was discovered in the Arch, and upon estimates being asked for a new arch, the contract was awarded to W^m. Sellers & Co for the sum of \$678⁰⁰.

The Press styled N^o. 10 was located also on the west side of the Coining Room, south of the visitors entrance, and took the place of N^o. 9 Press, which now stands front on the west side of the room,

The beams of these presses when purchased were of brass, the pivots, or joint-pins being of hardened steel $1\frac{3}{4}$ inches in diameter,

Mint of the United States at Philadelphia, Pa.,

SUPERINTENDENT'S OFFICE,

1885

It was found that the excessive pressure necessary to coin the standard dollar, acting on these pins forced them into the brass beam, which by a constant wedging displaced the metal of the beam on a line between the centres of the pins, causing a rupture, or a forcing off of the head of the beam.

To obviate this difficulty new pins were constructed which should distribute the pressure evenly over a larger surface of the beam, subjecting the metal of beam, to the extent of fifteen square inches, to a direct compression strain, thereby removing the danger from wedging as caused by the round pins,

This process was at first tested on the

Mint of the United States at Philadelphia, Pa.,

SUPERINTENDENT'S OFFICE,

, 188 .

brass beam of the first Ajax Press, this beam was found to be honey combed, that is, the metal was porous, and the settling of the metal under the round pins so rapid as to cause uneasiness as to how soon a rupture would ensue; The flat bottom pins were introduced and the press with the same beam has been in constant operation since these repairs were made in 1877.

To return to the consideration of No. 10 Press, The alteration of the pins, together with the insertion of hardened steel shoes in head block and centrepiece, placed this press in such condition that for a space of three years it continued coining standard dollars, day and night, and was considered to be the most reliable

Mint of the United States at Philadelphia, Pa.,

SUPERINTENDENT'S OFFICE,

188 .

press on that work in the Coining Room.

During the year 1884 a crack was observed in the arch of No. 10 press, and the Orr & Hess Machine Co, Limited were directed to prepare a new arch, after these repairs had been made and the press was again in running order, it was by the direction of the Hon H. C. Burdard, Director of the Mints, removed to the Exhibitions at New Orleans.

By a reference to the stubs of the order book you will find that an order was issued on the Orr & Hess Mch. Co. Limited for an Ajax Press similar to the one standing in the Coining Room, East Side, the date of the order is December 5th 1884.

Mint of the United States at Philadelphia, Pa.,

SUPERINTENDENT'S OFFICE,

188 .

The Ajax Press placed in The Coining Room in June of this year was not completed until some days after July 1st, two or more workmen being employed in finishing the same.

Replying to your question as to the reasonableness of the cost of this press, I would say, that taking the price as paid for the new arch of N^o 1 Press, viz, \$678⁰⁰ and using this as a basis on which to estimate the value of other parts I can only arrive at the conclusion that the price paid for the Ajax Press delivered in June last viz ⁴12,500 if divided by 2 would fully cover the value of that press. That is I believe a similar press could be furnished

Mint of the United States at Philadelphia, Pa.,

SUPERINTENDENT'S OFFICE,

188

for the amount of from six to seven thousand dollars, to obtain accurate information on this point it would be necessary to estimate from accurate drawings and specifications.

I have purposely given as above the information relating to Presses Nos 7 & 10 to show the capability of those presses, and, the reason for assuming the value of the Ajax Press.

I will further add that in making of the new arc for No 7 Press test bars were taken from the castings made, to insure the proper tensile strength, more than one casting being made. For further information on this point I refer you to Messrs Sellers & Co. Had No 10 Press remained in the mint

Mint of the United States at Philadelphia, Pa.,

SUPERINTENDENT'S OFFICE,

188

or had it been returned at the close of the exhibition, there would not be so far as I am able to see the necessity for the *Opax Press*.

In conclusion allow me to suggest, that the only way in which the Government may protect itself in the purchase of new machines, would be in having its own drawings, and, specifications, upon which builders should estimate; together with a thorough examination by a competent expert before the acceptance of any and all machinery delivered,

Very Respectfully
Samuel James

Jameson & Co. St. Louis

730 1/2

Mint of the United States at Philadelphia, Pa.,

SUPERINTENDENT'S OFFICE,

Aug 6, 1885

Steel.

Coiner.

Superintendent.

Cyap. Loring Press
& Papers relating
thereto.

No. of Enclosures,

[Abstract:] Ajax Coining Press & Paper relating thereto.

Mint of the United States at Philadelphia, Pa.,
Machine Shop,
August 8, 1885

Hon. Daniel M. Fox
Superintendent

Sir,

In reply to your favor of the 5th inst., asking information relative to the construction, cost, and the necessity for the purchase of the Coining Press, placed in the Coining Room in the month of June 1885; with such other information as may relate to the same: I beg leave to submit the following.

During the year 1868 there were placed in the Coining Room two coining presses, built by Morgan, Orr & Co. and numbered respectively 7 & 10. No. 7 Press was located on the west side of the Coining Room, north of the visitors entrance, taking the place of an old pattern press which was sent to Carson City for use in the Mint there, it was I believe never set up, but was for some reason destroyed.

No. 7, Press was built, as was its mate No. 10, for the coinage of the Standard Dollar, it was used for that coin until the year 1878, when a crack was discovered in the arch, and upon estimates being asked for a new arch: the contract was awarded to Wm. Sellers & Co. for the sum of \$678.00. The Press styled No. 10 was located also on the west side of the Coining Room, south of the visitors entrance, and took the place of No. 9 Press, which now stands front on the west side of the room.

The beams of these presses when purchased were of brass, the pivots, or joint pins being of hardened steel 1 $\frac{3}{4}$ inches in diameter. It was found that the excessive pressure necessary to coin the standard dollar, acting on these pins forced them into the brass beam, which by a constant wedging displaced the metal of the beam on a line between the centres of the pins, causing a rupture, or a forcing off of the head of the beam. To obviate this difficulty new pins were constructed which should distribute the pressure evenly over a larger surface of the beam, subjecting the metal of beam, to the extent of fifteen square inches, to a direct compression strain, thereby removing the danger from wedging as caused by the round pins.

This process was at first tested on the brass beam of the first Ajax Press, this beam was found to be honey combed, that is, the metal was porous, and the settling of the metal under the round pins so rapid as to cause uneasiness as to how soon a rupture would ensure; The flat bottoms pins were introduced and the press with the same beam has been in constant operation since these repairs were made in 1877.

To return to the consideration of No. 10 Press, the alteration of the pins, together with the insertion of hardened steel shoes in head block and centrepiece, placed this press in such

condition that for a space of three years it continued coining standard dollars, day and night, and was considered to be the most reliable press on that work in the coining room.

During the year 1884 a crack was observed in the arch of No. 10 press, and the Orr & Hess Machine Co. Limited were directed to prepare a new arch, after these repairs had been made and the press was again in running order, it was by the direction of the Hon. H.C. Burchard, Director of the Mints, removed to the Exhibition at New Orleans.

By a reference to the stubb of the order book you will find that an order was issued on the Orr & Hess Mch. Co. Limited for an Ajax Press similar to the one standing in the Coining Room, east side, the date of the order is December 5th, 1884.

The Ajax Press placed in the Coining Room in June of this year was not completed until some days after July 1st, two or more workmen being employed in finishing the same.

Replying to your question as to the reasonableness of the cost of this press, I would say, that taking the price as paid for the new arch of No. 7 Press, viz, \$678.00 and using this as a basis on which to estimate the value of other parts I can only arrive at the conclusion that the price paid for the Ajax Press delivered in June last viz \$12,500 if divided by 2 would fully cover the value of that press, that is I believe a similar press could be furnished for the amount of from six to seven thousand dollars, to obtain accurate information on this point it would be necessary to estimate from accurate drawings and specifications.

I have purposely given as above the information relating to Presses No. 7 & 10 to show the capability of those presses, and, the reason for assuming the value of the Ajax Press. I will further add that in making of the new arch for No. 7 Press test bars were taken from the castings made, to insure the proper tensile strength, more than one casting being made. For further information on this point I refer you to Wm. Sellers & Co. Had No. 10 Press remained in the Mint or had it been returned at the close of the exhibition, there would not be as far as I am able to see the necessity for the Ajax Press.

In Conclusion allow me to suggest, that the only way in which the Government may protect itself in the purchase of new machines, would be in having its own drawings and specifications, upon which builders should estimate; together with a thorough examination by a competent expert before the acceptance of any and all machinery delivered.

Very Respectfully,
Saml. James
Foreman Mch. Shop